

# A Practitioner's Perspective on LCA & Policy on a Global Basis

Rita Schenck

American Center for Life Cycle Assessment, IERE

REACH Seminar, September 2006



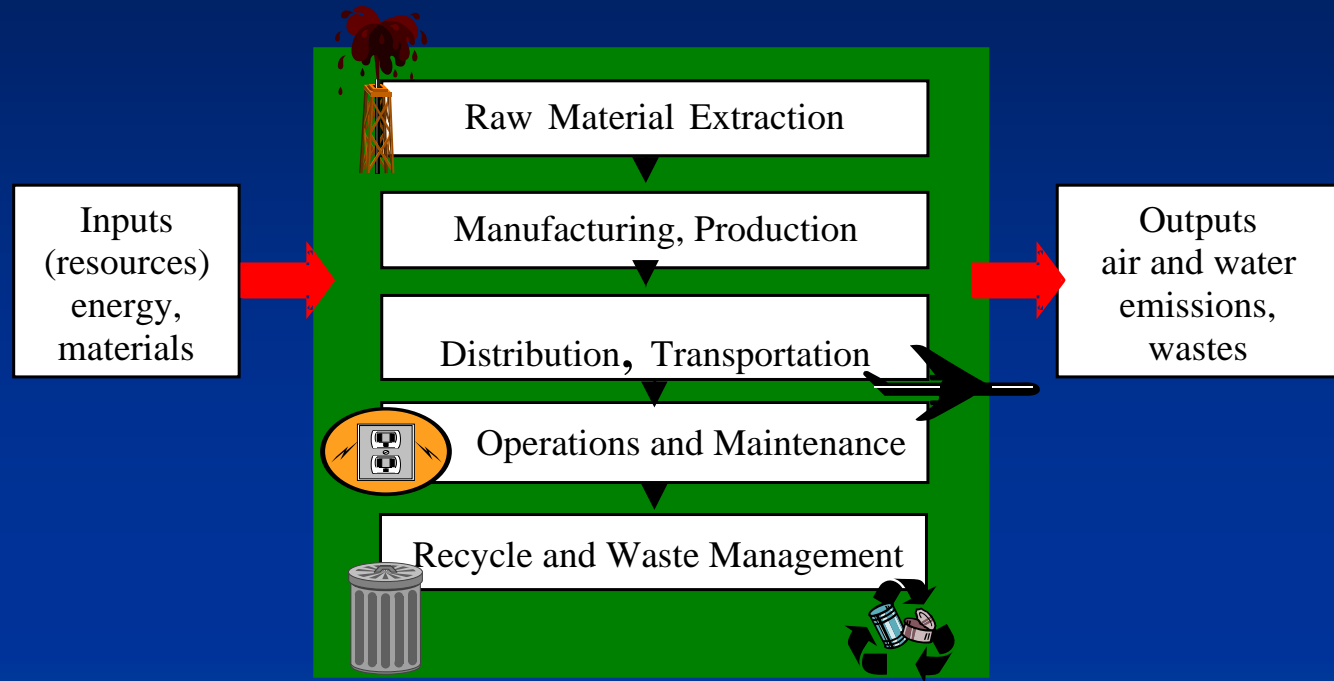
# American Center for LCA

- The Professional Society for LCA in the US, goal to promote LCA in decision-making
- A Program of the Institute for Environmental Research and Education (IERE), a 501(c)(3)
- Headquartered near Seattle
- Host of the InLCA/LCM conferences & other workshops, etc



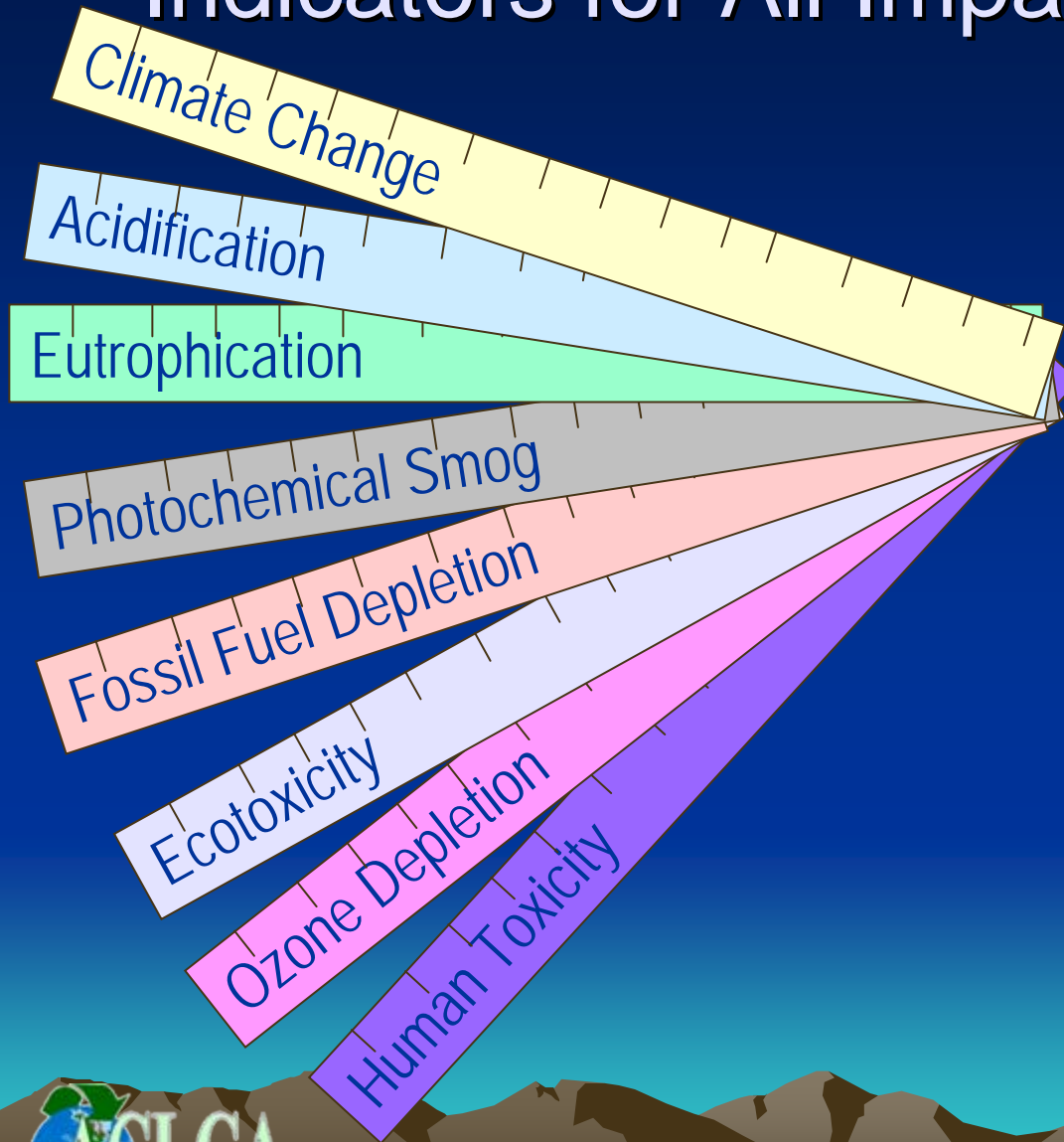
# LCA is: Systems Analysis

## Entire Systems, Cradle to Grave



*Industrial System*

# Indicators for All Impact Categories



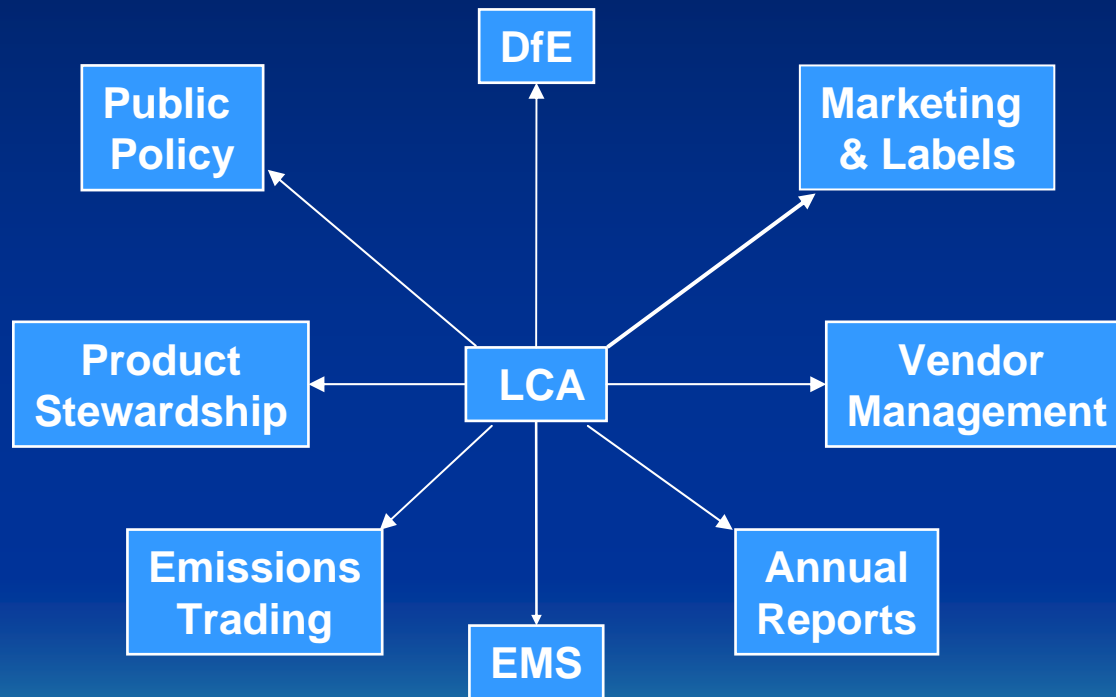
- Science-based
- Comprehensive
- Transparent

# Outcome is the Ecoprofile (Type III Ecolabel)

Rosendahl Farm #rfne001 Pork Ecoprofile			
Impact Category	% of US Average	Farm Result	Unit per Pound Meat
Climate Change	21	3.9	lbs CO <sub>2</sub> equivalents
Stratospheric Ozone Depletion	0	0.0	lbs CFC-12 equivalents
Acidification	64	0.1	lbs SO <sub>2</sub> equivalents
Eutrophication	107	0.067	lbs PO <sub>4</sub> equivalents
Photochemical Smog	0	0.0	lbs ozone equivalents
Aquatic Toxicity	42	0.4	lbs water polluted
Fossil Fuel Depletion	99	2.5	lb oil equivalents
Water Use	66	621	lbs water used
Antibiotic Use	98	0.0002	moles antibiotic used
Soil losses	65	10	lbs soil eroded
Hormone Used	0	0.0	moles hormone used
Gene Modified Organisms	183	73	% of feed is GMO



# Some Uses of LCA



# LCA History

- First LCA's in the US in the 1970's
- Focus on energy systems
- In the 1980, several workshops hosted by the Society of Environmental Toxicology & Chemistry (SETAC)
- European Type III ecolabels begin (Blue Angel)
- In the 1990's ISO standards created (the ISO 14040 series)
- US EPA Purchasing programs begin
- In the 2000's UNEP partnered with SETAC to develop better data systems
  - Sustainable Production & Consumption programs



# ISO & International Law

- ISO is the sister organization to the WTO
- Role is to create international standards to facilitate international trade
- Assumption imbedded in international law is that, by definition, ISO-based national and local laws do not create trade barriers
  - (*Agreement on Technical Barriers to Trade*)





# LCA-based Laws in Europe

- 2002 Restriction on the use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)
- 2003 Integrated Product Policy (IPP)
- 2003 End of Life Vehicles
- 2004 EU Directive on Packaging & packaging waste
- 2005 Waste Electrical and Electronic Equipment (WEEE)
- 2006 Registration, Evaluation, Authorisation and Restriction of Chemicals
- 2006 (expected) Batteries Directive



# A few comments on EU laws

- Most of the EU laws seem to be focused on end-of-life (waste minimization, product take back) kinds of issues
- REACH is really focused on toxicity
- Fundamentally, laws say “you make it, you own it” Product design is key to the thought process.
- Countries must harmonize with directives
- Litigation is underway for some national laws
- Take back is problematic for long-distance suppliers



# USA implication of EU Laws

- WEEE, REACH are creating problems for US Manufacturers
- Initiative to address these issues is underway
  - Mary Saunders [mary.saunders@nist.gov](mailto:mary.saunders@nist.gov)



# Japanese LCA Based Laws

- Laws come from MITI (Ministry of Economy, Trade & Industry)
  - Kyoto Protocols– Climate Change
  - Recycling Oriented Economy
  - Chemical Integrated Policy (Hazardous Chemical Management)
- So far, Japan's focus is internal
  - Development of Life Cycle Inventory (US\$11MM)
  - Recycling in-country
  - Development of Type III ecolabel



# Other Countries Considering LCA Approach

- Australia
- Canada
- China
- India
- Korea
- South Africa



# Implications for the USA

- US business is at risk because its LCA infrastructure is poorly funded
- It is easy to argue that distant sources are less environmentally desirable because of the impacts of transport
- US Laws are not based on LCA, and are less able to be applied to other countries (e.g. low sulfur fuel failure)
- Credible, inexpensive & rapid US based analysis is not currently possible



# What you can do

- Talk to me!
- Efforts are underway to change the situation: meeting planned for InLCA conference in October
- Brief your management

